

LISTING OF THE CLAIMS

No claim amendments are made herein. This listing of the claims is provided for the convenience of the Examiner.

1-23. (Cancelled)

24. (Previously Presented) A method for stimulating living tissue(s) with an electrical neurostimulator, the method comprising:

maintaining a plurality of stimulation sets of stimulation parameters with each set of stimulation parameters defining at least a pulse characteristic and an electrode configuration in memory of the neurostimulator;

maintaining a repetition parameter for at least one of the plurality of stimulation sets in memory of the neurostimulator; and

stimulating living tissue(s) using a substantially continuous set of pulses wherein the stimulating includes (i) successively selecting a stimulation set from the plurality of stimulation sets in a cyclical manner; (ii) generating a pulse according to the pulse characteristic of the selected stimulation set; and (iii) delivering the generated pulse to living tissue(s) through electrodes according to the electrode configuration of the selected stimulation set;

wherein the stimulating repeats the generating and delivering for the at least one of the plurality of stimulation sets according to the repetition parameter within each stimulation cycle independent from one or several frequency parameters associated with the plurality of stimulation sets.

25. (Previously Presented) The method of claim 24 further comprising:

maintaining a skipping parameter for a second stimulation set of the plurality of stimulation sets;

wherein the stimulating omits performing the generating and delivering for the second stimulation set for a number of consecutive cycles within a predetermined number of cycles according to the skipping parameter.

26. (Previously Presented) The method of claim 24 wherein the pulse characteristic is a pulse amplitude.

27. (Previously Presented) The method of claim 24 wherein the pulse characteristic is a pulse width.

28. (Previously Presented) An electrical neurostimulator for stimulating living tissue, comprising:

memory storing a plurality of stimulation sets of stimulation parameters with each set of stimulation parameters defining at least a pulse characteristic and an electrode configuration;

the memory further storing a repetition parameter for at least one of the plurality of stimulation sets;

a pulse generator that outputs a pulse having a pulse characteristic; and

a microprocessor operating under executable instructions that:

(i) successively selects a stimulation set from the plurality of stimulation sets in a cyclical manner;

(ii) loads the pulse characteristic into a pulse control associated with the pulse generator;

(iii) configures an output switch matrix according to the electrode configuration of the selected stimulation set;

(iv) causes the pulse generator to output at least one pulse after the loading and configuring, wherein the microprocessor causes the pulse generator to generate adjacent pulses according to a frequency parameter; and

(v) when the selected stimulation set is the at least one stimulation set associated with the repetition parameter, repeating (iv) according to the repetition parameter within a stimulation cycle independent from the frequency parameter.

29. (Previously Presented) The electrical neurostimulator of claim 28 wherein the memory further stores a skipping parameter for a second stimulation set of the plurality of stimulation sets; and

wherein the microprocessor is further operable to omit selecting the second stimulation set for a number of consecutive cycles within a predetermined number of cycles according to the skipping parameter.

30. (Previously Presented) The electrical neurostimulator of claim 28 wherein the pulse characteristic is a pulse amplitude.

31. (Previously Presented) The electrical neurostimulator of claim 29 wherein the pulse characteristic is a pulse width.